

Abstract Submitted
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Statistics of Cooper's pairs ILYA KAPLAN¹, IIM UNAM, ORACIO NAVARRO, IIM UNAM — It is well known that the Cooper pair (pairon) operators may not be considered either as the Bose operators nor as the Fermi operators. The analysis of trilinear commutation relations for the pairon operators reveals that they correspond to the modified parafermi statistics of rank $p=1$. Two different expressions for the Cooper pair number operator are presented. We demonstrate that the calculations with a Hamiltonian expressed via pairon operators is more convenient using the commutation properties of these operators without presenting them as a product of fermion operators. This allows to study problems in which the interactions between Cooper's pairs are also included. The problem with two interacting Cooper's pairs is resolved and its generalization in the case of large systems is discussed¹. ¹ I.G. Kaplan, O. Navarro, and J.A. Sánchez, *Physica C* (in Press).
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